

WHAT IS CLAIMED IS:

1. An interior construction system comprising:  
one or more prefabricated drywall elements;  
at least one skim coat deposited on the one or more prefabricated drywall elements from a coating formulation comprising water, a binder, a mineral filler and a noncellulosic thickener; and  
at least one jointing material for assembling the one or more prefabricated drywall elements by jointing the drywall elements to form a substantially plane outer surface, wherein the jointing material, when dry, substantially matches the skim coat.
2. The system of claim 1, wherein the at least one jointing material and at least one skim coat form a substantially homogeneous outer surface on the substantially plane outer surface.
3. The system of claim 1, wherein at least one of the parameters in the group consisting of coloration, reflectance factor and surface water absorption is substantially homogeneous over the substantially plane outer surface.
4. The system of claim 1, wherein the at least one jointing material and the at least one skim coat exhibit substantially the same surface water absorption when dry.
5. The system of claim 3, wherein the surface water absorption, as measured by the drop test, is at least 45 minutes for both the jointing material and the skim coat.
6. The system of claim 1, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to

about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

7. The system of claim 6, wherein the anti-cracking agent is mica and the workability agent is clay.

8. The system of claim 1, wherein the mineral filler comprises more than about 60% calcium carbonate.

9. The system of claim 1, wherein the drywall elements are gypsum wallboard.

10. A method for the construction of interior walls comprising:  
assembling skim coated prefabricated drywall elements, wherein the skim coated prefabricated drywall elements have a coating layer of at least one skim coat deposited on the prefabricated elements by a coating device, the skim coat formed from a coating formulation comprising water, a binder, a mineral filler, and a noncellulosic thickener;

jointing adjacent prefabricated elements with at least one jointing material wherein the jointing material, when dry, substantially matches the skim coat; and

drying the jointing material.

11. The method of claim 10, wherein the at least one jointing material and the at least one skim coat form, in the dry state, a substantially homogeneous outer surface.

12. The method of claim 11, wherein at least one of the parameters in the group consisting of coloration, reflectance factor and surface water absorption is substantially homogeneous over the substantially homogeneous outer surface.

13. The method of claim 10, wherein the at least one jointing material and the at least one skim coat exhibit substantially the same surface water absorption when dry.

14. The method of claim 12, wherein the surface water absorption, as measured by the drop test, is at least 45 minutes for both the jointing material and the skim coat.

15. The method of claim 10, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

16. The method of claim 15, wherein the anti-cracking agent is mica and the workability agent is clay.

17. The method of claim 10, wherein the mineral filler comprises more than about 60% calcium carbonate.

18. The method of claim 10, wherein the drywall elements are gypsum wallboard.

19. An interior construction system comprising:  
one or more prefabricated drywall elements;  
at least one skim coat deposited on the one or more prefabricated drywall elements from a coating formulation comprising water, a binder, a mineral filler and a noncellulosic thickener; and  
at least one jointing material for assembling the one or more prefabricated drywall elements by jointing the drywall elements to form a substantially plane outer surface, the jointing material comprising substantially the same solids as the coating formulation, wherein the amount

of water in the jointing material is from about 10% to about 60% less than the amount of water in the coating formulation.

20. The system of claim 19, wherein the at least one jointing material and at least one skim coat form a substantially homogeneous outer surface on the substantially plane outer surface.

21. The system of claim 19, wherein at least one of the parameters in the group consisting of coloration, reflectance factor and surface water absorption is substantially homogeneous over the substantially plane outer surface.

22. The system of claim 19, wherein the at least one jointing material and the at least one skim coat exhibit substantially the same surface water absorption.

23. The system of claim 21, wherein the surface water absorption, as measured by the drop test, is at least 45 minutes for both the jointing material and the skim coat.

24. The system of claim 19, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

25. The system of claim 24, wherein the anti-cracking agent is mica and the workability agent is clay.

26. The system of claim 19, wherein the mineral filler comprises more than about 60% calcium carbonate.

27. The system of claim 19, wherein the drywall elements are gypsum wallboard.

28. A method for the construction of interior walls comprising:  
assembling skim coated prefabricated drywall elements, wherein the skim coated prefabricated drywall elements have a coating layer of at least one skim coat deposited on the prefabricated elements by a coating device, the skim coat formed from a coating formulation comprising water, a binder, a mineral filler, and a noncellulosic thickener;  
jointing adjacent prefabricated elements with at least one jointing material, the jointing material comprising substantially the same solids as the coating formulation, wherein the amount of water in the jointing material is from about 10% to about 60% less than the amount of water in the coating formulation; and  
drying the jointing material.

29. The method of claim 28, wherein the at least one jointing material and the at least one skim coat form, in the dry state, a substantially homogeneous outer surface.

30. The method of claim 29, wherein at least one of the parameters in the group consisting of coloration, reflectance factor and surface water absorption is substantially homogeneous over the substantially homogeneous outer surface.

31. The method of claim 28, wherein the at least one jointing material and the at least one skim coat exhibit substantially the same surface water absorption when dry.

32. The method of claim 30, wherein the surface water absorption, as measured by the drop test, is at least 45 minutes for both the jointing material and the skim coat.

33. The method of claim 28, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

34. The method of claim 33, wherein the anti-cracking agent is mica and the workability agent is clay.

35. The method of claim 28, wherein the mineral filler comprises more than about 60% calcium carbonate.

36. The method of claim 28, wherein the drywall elements are gypsum wallboard.

37. An interior construction system comprising:  
one or more prefabricated drywall elements;  
at least one skim coat deposited on the one or more prefabricated drywall elements from a coating formulation comprising water, a binder, a mineral filler and a noncellulosic thickener; and  
at least one jointing material for assembling the one or more prefabricated drywall elements by jointing the drywall elements to form a substantially plane outer surface, the jointing material comprising about 25 to about 45% water, about 40 to about 70 % of a mineral filler which is the same or different from the mineral filler of the coating formulation, about 1.0 to about 3.0% anti-cracking agent, about 1.0 to about 4.0% clay, about 0.1 to about 1.0% thickener and water retention agent, about 1.0 to 5.0% talc, about 0.5 to about 20% of a binder which is the same or different as the binder of the coating formulation, and about 0.1 to about 1.0% starch.

38. The system of claim 37, wherein the at least one jointing material and at least one skim coat form a substantially homogeneous outer surface on the substantially plane outer surface.

39. The system of claim 37, wherein the surface water absorption, as measured by the drop test, is at least 45 minutes for both the jointing material and the skim coat.

40. The system of claim 37, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

41. The system of claim 40, wherein the anti-cracking agent is mica and the workability agent is clay.

42. The system of claim 37, wherein the mineral filler in each of the coating formulation and the jointing material comprises more than about 60% calcium carbonate.

43. The system of claim 37, wherein the thickener and water retention agent in the jointing material comprises hydroxypropyl methylcellulose.

44. The system of claim 37, wherein the binder in the coating formulation and the binder in the jointing material is the same.

45. The system of claim 43, wherein the binder in the jointing material is an acrylic polymer.

46. The system of claim 37, wherein the drywall elements are gypsum wallboard.

47. A method for the construction of interior walls comprising:

assembling skim coated prefabricated drywall elements, wherein the skim coated prefabricated drywall elements have a coating layer of at least one skim coat deposited on the prefabricated elements by a coating device, the skim coat formed from a coating formulation comprising water, a binder, a mineral filler, and a noncellulosic thickener;

jointing adjacent prefabricated elements with at least one jointing material wherein the jointing material comprises about 25 to about 45% water, about 40 to about 70 % of mineral filler which is the same or different from the mineral filler of the coating formulation, about 1.0 to about 3.0% anti-cracking agent, about 1.0 to about 4.0% clay, about 0.1 to about 1.0% thickener and water retention agent, about 1.0 to 5.0% talc, about 0.5 to about 20% of a binder which is the same or different as the binder of the coating formulation, and about 0.1 to about 1.0% starch; and

drying the jointing material.

48. The method of claim 47, wherein the at least one jointing material and the at least one skim coat form, in the dry state, a substantially homogeneous outer surface.

49. The method of claim 47, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

50. The method of claim 49, wherein the anti-cracking agent is mica and the workability agent is clay.

51. The method of claim 47, wherein the mineral filler in each of the coating formulation and the jointing material comprises more than about 60% calcium carbonate.



52. The method of claim 47, wherein the thickener and water retention agent in the jointing material comprises hydroxypropyl methylcellulose.

53. The method of claim 47, wherein the binder in the coating formulation and the binder in the jointing material is the same.

54. The method of claim 47, wherein the binder in the jointing material is an acrylic polymer.

55. The method of claim 47, wherein the drywall elements are gypsum wallboard.

56. An interior construction system comprising:  
one or more prefabricated drywall elements;  
at least one skim coat deposited on the one or more prefabricated drywall elements from a coating formulation comprising water, a binder, a mineral filler and a noncellulosic thickener; and  
at least one jointing material for assembling the one or more prefabricated drywall elements by jointing the drywall elements to form a substantially plane outer surface, wherein the jointing material comprises 50 to 85% of a mineral filler which is the same or different from the mineral filler of the coating formulation; 1 to 20% of an organic binder dispersible in an aqueous phase; 1 to 15% of a silicate-based agent; 0.2 to 5% of a hydrophobic agent which is a silicone derivative; 0.05 to 5% of polyvinyl alcohol; and water to make up to 100%.

57. The system of claim 56, wherein the at least one jointing material and at least one skim coat form a substantially homogeneous outer surface on the substantially plane outer surface.

58. The system of claim 56, wherein the surface water absorption, as measured by the drop test, is at least 45 minutes for both the jointing material and the skim coat.

59. The system of claim 56, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

60. The system of claim 59, wherein the anti-cracking agent is mica and the workability agent is clay.

61. The system of claim 56, wherein the mineral filler in the coating formulation comprises more than about 60% calcium carbonate.

62. The system of claim 56, wherein the drywall elements are gypsum wallboard.

63. A method for the construction of interior walls comprising:  
assembling skim coated prefabricated drywall elements, wherein the skim coated prefabricated drywall elements have a coating layer of at least one skim coat deposited on the prefabricated elements by a coating device, the skim coat formed from a coating formulation comprising water, a binder, a mineral filler, and a noncellulosic thickener;

jointing adjacent prefabricated elements with at least one jointing material wherein the jointing material comprises 50 to 85% of a mineral filler which is the same or different from the mineral filler of the coating formulation; 1 to 20% of an organic binder dispersible in an aqueous phase; 1 to 15% of a silicate-based agent; 0.2 to 5% of a hydrophobic agent which is a silicone derivative; 0.05 to 5% of polyvinyl alcohol; and water to make up to 100%; and

drying the jointing material.

64. The method of claim 63, wherein the at least one jointing material and the at least one skim coat form, in the dry state, a substantially homogeneous outer surface.

65. The method of claim 63, wherein the coating formulation further comprises about 0.5 to about 15.0% by weight dispersant, about 0.1 to about 20% by weight anti-cracking agent and about 0.1 to about 5% by weight workability agent.

66. The method of claim 65, wherein the anti-cracking agent is mica and the workability agent is clay.

67. The method of claim 63, wherein the mineral filler in the coating formulation comprises more than about 60% calcium carbonate.

68. The method of claim 63, wherein the drywall elements are gypsum wallboard.